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No.

In the Supreme Court of the United States

OCTOBER TERM, 1997

BRUCE A. LEHMAN,
COMMISSIONER OF PATENTS
AND TRADEMARKS, PETITIONER

v.

MARY E. ZURKO, THOMAS A. CASEY, JR.,
MORRIE GASSER, JUDITH S. HALL, CLIFFORD E. KAHN,
ANDREW H. MASON, PAUL D. SAWYER,
LESLIE R. KENDALL, AND STEVEN P. LIPNER

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

PETITION FOR A WRIT OF CERTIORARI

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73 pp

QUESTION PRESENTED

Section 12 of the Administrative Procedure Act (APA), now revised and reenacted as 5 U.S.C. 559, provided that the Act did not "limit or repeal additional requirements imposed by statute or otherwise recognized by law." The question presented in this case is:

Whether a standard of judicial review more stringent than that specified by the APA, purportedly used by courts before the adoption of the Act in reviewing factual findings made by a particular agency, is an "additional requirement * * * otherwise recognized by law" within the meaning of Section 559.

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PETITION FOR A WRIT OF CERTIORARI

The Solicitor General, on behalf of the Commissioner of Patents and Trademarks, respectfully petitions for a writ of certiorari to review the judgment of the United States Court of Appeals for the Federal Circuit in this case.

OPINIONS BELOW

The opinion of the court of appeals sitting en banc (App., *infra*, 1a-27a) is reported at 142 F.3d 1447. The earlier opinion of a panel of that court (App., *infra*, 28a-34a) is reported at 111 F.3d 887. The opinions of the Board of Patent Appeals and Interferences (App., *infra*, 35a-47a) are unreported.

JURISDICTION

The judgment of the court of appeals was entered on May 4, 1998. On July 24, 1998, the Chief Justice extended the time within which to file a petition for a writ of certiorari to and including September 1, 1998. The jurisdiction of this Court is invoked under 28 U.S.C. 1254(1).

STATUTORY PROVISIONS INVOLVED

1. Section 559 of Title 5 of the United States Code (drawn from Section 12 of the Administrative Procedure Act, Pub. L. No. 404, ch. 324, 60 Stat. 244) provides in pertinent part as follows:

§ 559. Effect on other laws; effect of subsequent statute

This subchapter, [and] chapter 7 * * * of this title, * * * do not limit or repeal additional requirements imposed by statute or otherwise recognized by law. Except as otherwise required by law, requirements or privileges relating to evidence or procedure apply equally to agencies and persons. Each agency is granted the authority necessary to comply with the requirements of this subchapter through the issuance of rules or otherwise. Subsequent statute may not be held to supersede or modify this subchapter, [or] chapter 7 * * * of this title, * * * except to the extent that it does so expressly.

2. Section 701 of Title 5 of the United States Code (drawn from Sections 2 and 10 of the Administrative Procedure Act, Pub. L. No. 404, ch. 324, 60 Stat. 237) provides in pertinent part as follows:

§ 701. Application; definitions

(a) This chapter applies, according to the provisions thereof, except to the extent that—

(1) statutes preclude judicial review; or

(2) agency action is committed to agency discretion by law.

(b) For the purpose of this chapter—

(1) "agency" means each authority of the Government of the United States, whether or not it is within or subject to review by another agency, but does not include—

(A) the Congress;

(B) the courts of the United States;

(C) the governments of the territories or possessions of the United States;

(D) the government of the District of Columbia;

(E) agencies composed of representatives of the parties or of representatives of organizations of the parties to the disputes determined by them;

(F) courts martial and military commissions;

(G) military authority exercised in the field in time of war or in occupied territory; or

(H) functions conferred by sections 1738, 1739, 1743, and 1744 of title 12; chapter 2 of title 41; subchapter II of chapter 471 of title 49; or sections 1884, 1891-1902, and former section 1641(b)(2), of title 50, appendix[.]

3. Section 706 of Title 5 of the United States Code (drawn from Section 10(e) of the Administrative Procedure Act, Pub. L. No. 404, ch. 324, 60 Stat. 243) provides as follows:

§ 706. Scope of review

To the extent necessary for decision and when presented, the reviewing court shall decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the terms of an agency action. The reviewing court shall—

(1) compel agency action unlawfully withheld or unreasonably delayed; and

(2) hold unlawful and set aside agency action, findings, and conclusions found to be—

(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

(B) contrary to constitutional right, power, privilege, or immunity;

(C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right;

(D) without observance of procedure required by law;

(E) unsupported by substantial evidence in a case subject to sections 556 and 557 of this title or otherwise reviewed on the record of an agency hearing provided by statute; or

(F) unwarranted by the facts to the extent that the facts are subject to trial de novo by the reviewing court.

In making the foregoing determinations, the court shall review the whole record or those parts of it cited by a party, and due account shall be taken of the rule of prejudicial error.

STATEMENT

1. Respondents applied for a patent, claiming that they had invented a method of improving security in computer systems that include both "trusted" and "untrusted" computing environments. See App., *infra*, 28a-29a & n.1. The application acknowledged that the UNIX operating system had previously taught the feasibility of having an "untrusted" program "pars[e] a command [such as a user keyboard entry] and then execut[e] the command by calling a trusted service that executes in a trusted computing environment." *Id.* at 30a. It also acknowledged that another existing program, FILER2, had taught the mechanism of "repeat[ing] back potentially dangerous user commands and request[ing] confirmation from the user prior to execution." *Ibid.* Respondents claimed a patentable invention in the idea of processing a "trusted" command

in an "untrusted" environment, relaying the parsed command to a trusted environment, and then having the trusted portion of the system seek user verification, over a trusted pathway, before executing the command. See *id.* at 29a.

After a preliminary narrowing of the claims at issue (see App., *infra*, 40a & n.2), an examiner employed by petitioner, the Commissioner of Patents and Trademarks (Commissioner), rejected respondents' patent application. See 35 U.S.C. 131-132. The examiner first determined that respondents' remaining claims were not stated with the specificity necessary to satisfy 35 U.S.C. 112. See App., *infra*, 41a. In any event, the examiner concluded (*ibid.*) that respondents were not entitled to a patent because, in the language of 35 U.S.C. 103, "the differences between the subject matter sought to be patented and the prior art [were] such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art."

Respondents appealed the examiner's decision to the Board of Patent Appeals and Interferences (the Board). See 35 U.S.C. 134.[1] The Board rejected the examiner's conclusion that respondents' claims were not properly specified (App., *infra*, 42a-43a), but it sustained the examiner's refusal to issue a patent on the ground that the claimed invention was "obvious" within the meaning of 35 U.S.C. 103. The Board agreed with the examiner that it was proper to read the two cited instances of prior art in conjunction, and that one ordinarily skilled in the relevant art "would have been led from these teachings to take the trusted command parsed in the untrusted environment and submitted to the trusted computing environment, as taught by UNIX, and to display the parsed command to the user for confirmation prior to execution, as suggested by [FILER2]." App., *infra*, 44a.

[1] The Board consists of petitioner, the Deputy Commissioner and Assistant Commissioners of Patents and Trademarks, and a number of patent "examiners-in-chief," who are "persons of competent legal knowledge and scientific ability * * * appointed to the competitive service." 35 U.S.C. 7(a). The Board ordinarily acts through panels of three members, as it did in this case. See 35 U.S.C. 7(b); App., *infra*, 35a. When deciding cases, the members of the Board are generally known as "Administrative Patent Judges." See 1156 Off. Gaz. Pat. Office 32 (1993); App., *infra*, 35a.

The Board rejected respondents' argument that the use of a trusted (rather than untrusted) path to seek and receive verification from the user before executing the command involved a non-obvious advance over the prior art. App., *infra*, 45a. Rather, the Board concluded, "[c]ommunication in a trusted environment would normally be assumed, by artisans, to be over trusted paths," so that the use of such a path for verification, in a system designed to ensure security, was, "if not explicit," then "either inherent or implicit" in the prior art. *Ibid.*[2]

2. Respondents sought review of the Board's decision in the United States Court of Appeals for the Federal Circuit, as permitted by 35 U.S.C. 141. A panel of that court concluded that the Board's decision should be reversed. App., *infra*, 28a-34a. The court noted that "[o]bviousness is a legal question based on underlying factual determinations" (*id.* at 31a), and that "[w]hat a [prior-art] reference teaches and whether it teaches toward or away from the claimed invention are questions of fact" (*id.* at 32a). Reviewing the references

[2] At respondents' request, the Board reconsidered this portion of its decision. After doing so, however, it adhered to its original reasoning and conclusions. App., *infra*, 35a-38a.

cited by the Board, the court determined that "neither UNIX nor FILER2 teaches communicating with the user over a trusted pathway." *Id.* at 33a. Concluding that the Board had "impermissibly used hindsight" in evaluating respondents' claimed invention, the court held that "the Board's finding that the prior art teaches, either explicitly or inherently, the step of obtaining confirmation over a trusted pathway" was "clearly erroneous." *Id.* at 32a; see also *id.* at 33a.

The court noted petitioner's argument that it "should review findings by the Board using a more deferential standard as required by the Administrative Procedure Act [(APA)], 5 U.S.C. § 706(2) (1994)." App., *infra*, 32a n.7. Although the panel opinion indicated that, in light of Federal Circuit precedent, "[o]nly the court sitting in banc [could] answer the question of whether a different standard of review of the Board's findings should apply," it observed that a suggestion of en-banc rehearing could "appropriately" be made where, as in this case, the court had already determined that the Board's decision would be reversed under a non-APA standard of review. *Ibid.*

3. The full court of appeals, "[c]oncluding that the outcome of this appeal turns on the standard of review used by th[e] court to review board fact finding," accepted petitioner's suggestion that it rehear this case en banc to consider whether the Board's factual findings should be reviewed "under the Administrative Procedure Act standard of review instead of the presently applied 'clearly erroneous' standard." App., *infra*, 2a. After considering the matter, the court determined that it would adhere to what it viewed as traditional practice, rather than apply the standards prescribed by the APA. *Id.* at 1a-27a.

The court first noted that the APA's "substantial evidence" standard for reviewing agency factual findings, 5 U.S.C. 706(2)(E), would "require that we review board decisions on their own reasoning." App., *infra*, 3a. The court's "clear error" standard, by contrast, dictates affirmance "as long as we lack a definite and firm conviction that a mistake has been made"—a determination that "requires us to review board decisions on our reasoning." *Ibid.* Thus, in the court of appeals' view, its standard of review differed from those prescribed by the APA "both in character and [in] the amount of deference they contemplate." *Ibid.*

After discussing the history and general purposes of the APA (App., *infra*, 4a-7a), the court noted that the Patent and Trademark Office (PTO) had been the subject of specific attention during the APA's drafting and enactment (*id.* at 7a-8a). Although it acknowledged that Congress had specifically contemplated exempting the work of the Patent Office from the purview of the Act, but ultimately did not do so, the court interpreted the history of the Act as "suggest[ing] that Congress drafted the APA to apply to agencies generally, but that * * * [it] did not intend the APA to alter the review of substantive Patent Office decisions" by the courts. *Id.* at 8a-9a. The court construed 5 U.S.C. 559, which was drawn from the final Section of the APA as originally enacted and provides that the Act "do[es] not limit or repeal additional requirements imposed by statute or otherwise recognized by law," as "preserving those standards of judicial review that had evolved as a matter of common law [before the APA's enactment], rather than compelling that all such standards of review be displaced by the [APA]." *Id.* at 9a-10a.

The court then reviewed at some length the history of the patent laws, including the various mechanisms historically provided for administrative and judicial review of decisions to grant or deny patents. App., *infra*, 9a-22a. On the basis of its review, the court observed that no patent statute has ever spoken explicitly to the standard of review to be used by courts in reviewing administrative decisions in patent cases, but that "the common law recognized several standards prior to 1947, including clear error and its close cousins." *Id.* at 22a. On that basis, the court held that the "more searching clear error standard of review" that it has applied in lieu of the APA's "substantial evidence" standard "is an 'additional requirement' that was 'recognized' in our jurisprudence before 1947, which we therefore continue to apply under the exception in section 559." *Id.* at 22a-23a.

The court found additional support for its holding in the principle of stare decisis. App., *infra*, 23a-26a. Having concluded that there had been a "settled practice of reviewing factual findings of the board's patentability determinations for clear error," the court held that its "interpretation of section 559 * * * permit[ted]" it to continue that practice, "because no statute speaks directly to a required standard, and review for clear error was certainly recognized in the cases — though perhaps not exclusively or intentionally — before 1947." *Id.* at 25a.

The court added that use of a non-APA standard is "justif[ied]" by "the premises underlying review for clear error": "By making it clear that we review factual findings for clear error, and thereby review board decisions on our own reasoning, we hope the board understands that we are more likely to appreciate and adopt reasoning similar to its reasoning when it is both

well articulated and sufficiently founded on findings of fact." *Id.* at 25a. The court thus hoped, through its choice of standard, to "encourage administrative records that more fully describe the metes and bounds of the patent grant than would a more deferential standard of review." *Ibid.* Finally, the court noted its belief that use of the "clearly erroneous" standard would "preserve the confidence of inventors who have relied on this standard in prosecuting their patents," "promote consistency between [the court's] review of the patentability decisions of the board and the district courts in infringement litigation," and "help avoid situations where board fact finding on matters such as anticipation or the factual inquiries underlying obviousness become virtually unreviewable." *Id.* at 26a.

Having concluded that "section 559 and *stare decisis* together justify our continued application of [a] heightened level of scrutiny to decisions by the board," the full court ratified the holding of the original panel that had applied such a standard and had reversed the Board's decision in this case. App., *infra*, 26a-27a.

REASONS FOR GRANTING THE PETITION

1. The provisions of the Administrative Procedure Act now embodied in Title 5 of the United States Code provide a generally applicable framework for proceedings seeking judicial review of "agency action." See 5 U.S.C. 702. The term "'agency action' includes the whole or a part of an agency * * * order, * * * relief, or the equivalent or denial thereof," and "relief" includes any agency "recognition of a claim, right, * * * [or] privilege * * * [or the] taking of other action on the application or petition of, and beneficial to, a person." 5 U.S.C. 551(11)(B), (11)(C), and (13),

701(b)(2). With exceptions not relevant here, the term "agency" includes "each authority of the Government of the United States, whether or not it is within or subject to review by another agency." 5 U.S.C. 701(b)(1). By their terms, these provisions apply to the Federal Circuit's review of a decision by the Board of Patent Appeals and Interferences to reject a patent application. See 35 U.S.C. 1 (establishing PTO within the Department of Commerce); 35 U.S.C. 7 (constituting Board); 35 U.S.C. 131-134 (administrative examination of applications and issuance or denial of patents); 35 U.S.C. 141-144 (review of Board decisions in the Federal Circuit); see also *Singer Co.* v. *P.R. Mallory & Co.*, 671 F.2d 232, 236 n.7 (7th Cir. 1982) (PTO falls within APA definition of "agency"); 5 U.S.C. 704 ("[a]gency action made reviewable by statute" is subject to judicial review); App., *infra*, 2a, 8a-9a, 21a-22a, 26a (acknowledging in en banc opinion that APA generally applies to the PTO).

The APA provides that "[t]he form of proceeding for judicial review is the special statutory review proceeding relevant to the subject matter in a court specified by statute." 5 U.S.C. 703. Under the patent laws, if a "dissatisfied" patent applicant seeks review of a Board decision in the Federal Circuit, the Commissioner must certify the administrative record to that court. 35 U.S.C. 141, 143. If, as is usually the case, there is no adverse private party, the Commissioner must also "submit to the court in writing the grounds for the decision of the Patent and Trademark Office, addressing all the issues involved in the appeal." 35 U.S.C. 143. The court then "review[s] the decision from which an appeal is taken on the record before the Patent and Trademark Office." 35 U.S.C. 144. Review concludes when the court "issue[s] to [petitioner] its mandate and

opinion, which shall be entered of record in the Patent and Trademark Office and shall govern the further proceedings in the case." *Ibid.*[3]

As the court of appeals noted in this case (App., *infra*, 22a), "no patent statute speaks explicitly to the standard to be used when reviewing decisions of the board." The absence of such a specific standard does not, however, authorize a reviewing court to adopt whatever standard it deems appropriate under the circumstances. This Court has made clear that, "[i]n the absence of a specific command in [a relevant statute] to employ a particular standard of review" of administrative action, that action "must be reviewed solely under the * * * standard prescribed by the Administrative Procedure Act." *American Paper Inst.* v. *American Elec. Power Serv. Corp.*, 461 U.S. 402, 412-413 n.7 (1983); see also *Steadman* v. *SEC*, 450 U.S. 91, 95-97 & n.9 (1981); *Citizens to Preserve Overton Park, Inc.* v. *Volpe*, 401 U.S. 402, 413-414 (1971); cf. *Vermont Yankee Nuclear Power Corp.* v. *Natural Resources Defense Council, Inc.*, 435 U.S. 519, 543-549 (1978) (court may not impose, on policy grounds, rulemaking procedures beyond those required by the APA or another applicable statute); compare App., *infra*, 25a-26a.

Under the APA, the Federal Circuit may "set aside" the Board's "action, findings, and conclusions" if they

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[3] An applicant who is "dissatisfied" with the Board's decision but does not wish to seek review in the court of appeals on the basis of the administrative record may instead file suit against the Commissioner in the United States District Court for the District of Columbia. 35 U.S.C. 145. By seeking review in the court of appeals, respondents "waive[d] [their] right to proceed under section 145" (35 U.S.C. 141), which is therefore not directly at issue in this case.

were "'arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law' or if [they] failed to meet statutory, procedural, or constitutional requirements." *Citizens to Preserve Overton Park*, 401 U.S. at 414 (quoting 5 U.S.C. 706(2)(A)-(D)). Because the Board's decisions are "reviewed on the record of an agency hearing provided by statute," they are also subject to the somewhat more searching "substantial evidence" standard of 5 U.S.C. 706(2)(E). See 35 U.S.C. 7(b), 134, 144; see also *American Paper Inst.*, 461 U.S. at 412 n.7 (distinguishing substantial-evidence review from "the more lenient arbitrary-and-capricious standard"). Nothing in the APA, however, authorizes the Federal Circuit to subject the Board's decisions to the "heightened level of scrutiny" (App., *infra*, 27a) that the court elected to apply in this case.

2. The court of appeals sought to justify its frank adoption of a "more searching" standard of review in patent cases, "free[d]" from the otherwise applicable limits of the APA, on the ground that such a "heightened" standard is an "additional requirement[] * * * otherwise recognized by law" within the meaning of 5 U.S.C. 559. See App., *infra*, 5a, 9a-10a, 22a-23a, 26a-27a. The court reasoned that, by providing that the APA would not "limit or repeal" such "additional requirements," Congress intended to "preserv[e] those standards of judicial review that had evolved as a matter of common law," to the extent they were more stringent than those provided in the new Act. App., *infra*, 9a-10a. Because "the common law recognized several standards [of review in patent cases] prior to 1947, including clear error and its close cousins," the court concluded that what is now Section 559 authorized it to continue to apply some such standard if it chose to do so. *Id.* at 22a, 26a.

Section 559 cannot bear the weight that the court of appeals would place upon it. It is based on Section 12—the final section—of the original Act, then entitled "Construction and Effect." Administrative Procedure Act, Pub. L. No. 404, ch. 324, § 12, 60 Stat. 244. The language of that concluding provision[4] is perhaps most naturally read to refer only to matters not addressed by the APA itself ("*additional* requirements"). See H.R. Rep. No. 1980, 79th Cong., 2d Sess. 47 (1946) (Section 12 "merely provides formal matters of construction and effect. * * * Any *inconsistent* agency action or statute is in effect repealed." (emphasis added)). Alternatively, it might refer to "requirements"—such as pre-existing informational, rule-making, or hearing requirements—greater than those specified in the APA's own core provisions, which were intended to specify a new "outline of minimum essential rights and procedures" governing agencies' own administrative operations. H.R. Rep. No. 1980, *supra*, at 16; see also *ibid.* ("Agencies may fill in details [of the 'outline'], so long as they publish them."); APA §§ 3-9, 60 Stat. 238-243; 5 U.S.C. 552-558 (current embodiment of same APA provisions). In either case, a standard of judicial review *different* from that specified in the APA itself is not an "additional requirement[]" within the meaning of what is now Section 559.[5]

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[4] The first sentence of Section 12 provided: "Nothing in this Act shall be held to diminish the constitutional rights of any person or to limit or repeal additional requirements imposed by statute or otherwise recognized by law." 60 Stat. 244.

[5] A non-APA standard of review specified by a particular statute would presumably govern in proceedings under that statute, whether it was more stringent or more lax than those set out in 5 U.S.C. 706. See, *e.g.*, *American Paper Inst.*, 461 U.S. at 412 n.7 (APA standard to be applied "[i]n the absence of a specific command in [the relevant statute] to employ a particular standard

Nor, despite the court of appeals' novel analysis (see App., *infra*, 6a-9a), is there anything in the history or general purposes of the APA to suggest that what is now Section 559 was intended to preserve whatever standards of review courts, including the Federal Circuit's predecessors, were applying in reviewing administrative decisions before the adoption of the Act. To the contrary, an important general purpose of the APA was to "supplant a variety of pre-existing methods for obtaining [judicial] review that differed from one agency to another." *Cousins* v. *Dep't of Transportation*, 880 F.2d 603, 606 (1st Cir. 1989) (en banc) (Breyer, J.).[6] Thus, although Congress certainly looked to existing law when it framed the new,

of review"). That result does not depend, however, on Section 559's "additional requirements" language. Such a provision would embody, not an "additional requirement[]" of review, but an inconsistent direction concerning the manner in which review should be conducted. The inconsistency would be resolved in accordance with ordinary principles of statutory construction, including the principle that a more specific enactment normally controls rather than a more general one—according due weight to Section 559's separate instruction that a later enactment should not be held to "supersede or modify" the APA "except to the extent that it does so expressly." 5 U.S.C. 559.

[6] See also *Cousins*, 880 F.2d at 606, quoting S. Rep. No. 442, 76th Cong., 1st. Sess. 9-10 (1939) (relating to an earlier version of the legislation that became the APA) ("'unfortunately,' existing statutes d[id] not provide for 'a uniform method and scope of judicial review'"); cf. H.R. Rep. No. 1980, 79th Cong., 2d Sess. 16 (1946) ("The bill is meant to be operative 'across the board' in accordance with its terms, or not at all. Where one agency has been able to demonstrate that it should be exempted, all like agencies have been exempted in general terms. (See [the definitional provision now at 5 U.S.C. 551(1)]). Where one agency has shown that some particular operation should be exempted from any particular requirement, the same function in all agencies has been exempted. No agency has been favored by special treatment.").

generally applicable review provisions of the APA (see, *e.g.*, App., *infra*, 6a-7a, 10a), there is no reason to think that it intended to preserve, rather than to eliminate, deviations from the norm it was prescribing. Moreover, so far as the PTO is concerned, what the legislative history demonstrates is that Congress specifically considered the nature of patent proceedings and the role of the PTO, but enacted the APA without excepting the PTO from the judicial review provisions of Section 10 of the Act (now 5 U.S.C. 701-706). See App., *infra*, 7a-8a. The court of appeals erred in interpreting Section 559 to create an exception that Congress itself did not see fit to make.[7]

Finally, the Federal Circuit's strained interpretation of Section 559 contravenes the principle that a court exceeds the proper bounds of statutory review when it interferes, to any greater extent than specifically authorized by the APA (or by some other applicable statute), with an administrative agency's discharge of the responsibilities that have been delegated to it by Congress. As noted above, this Court has made clear that a reviewing court is not authorized to direct an agency to adopt supplemental procedures beyond those required by the APA. *Vermont Yankee*, 435 U.S. at

[7] In addition, as the court of appeals itself recognized, "[i]t would be disingenuous to suggest that the courts employed a uniform standard of review [of Patent Office factual determinations] prior to 1947." App., *infra*, 11a; see also Dunner *et al.*, *Court of Appeals for the Federal Circuit: Practice & Procedure* § 6.04, at 6-49 to 6-52 (1995) (discussing various standards employed by the former Court of Customs and Patent Appeals). Thus, even if Section 559 could properly be construed to preserve different and more stringent standards of judicial review that were clearly established at the time the APA was passed, such an exception would not apply to the Federal Circuit's review of decisions by the PTO.

543-549; see *id.* at 544 (citing *FCC* v. *Schreiber*, 381 U.S. 279 (1965), "where the District Court * * * devised procedures to be followed by the agency on the basis of its conception of how the public and private interest involved could best be served"). Nor, where the APA prescribes the applicable standard, is a court free to decide that some other standard of proof should apply in an administrative proceeding, despite the traditional judicial role in resolving such questions in the absence of a statutory directive. *Steadman*, 450 U.S. at 95-97 & n.9. Similarly, it is "a simple but fundamental rule of administrative law" that, although a reviewing court may police the statutory boundaries within which Congress has authorized an agency to act, it may not substitute its discretion for that of the agency with respect to matters that fall within the legislative delegation. *SEC* v. *Chenery Corp.*, 332 U.S. 194, 196 (1947).

In the case of the PTO, Congress has created a comprehensive statutory scheme for the submission of patent applications to a specialized agency, the examination of those applications by qualified personnel, and the administrative grant or denial of patents. See 35 U.S.C. 111-122 (applications), 131-135 (examination). The statute itself makes clear that Congress intended to place the administration of the patent system, which by definition involves the evaluation of claimed advances at the border of scientific and technical knowledge, largely in the hands of persons who possess both "competent legal knowledge and scientific ability." 35 U.S.C. 7 (prescribing requirements for the appointment of examiners-in-chief), 282 (presumption of validity attaches to patent once it has been issued). It is, moreover, difficult to imagine any area in which the exercise of such administrative

expertise would be more critical than the determination of close factual questions relating directly to patentability, such as what the "prior art" relating to a particular claimed subject matter would have revealed or suggested to "a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. 103.[8]

The resolution of this case turns on just such a question. See App., *infra*, 1a-2a. Yet it is in this case, with respect to that question, that the Federal Circuit has reaffirmed its determination to subject the PTO's highly informed fact-finding to "heightened * * * scrutiny," beyond that authorized by the APA, for the stated purpose of preserving the court's ability "to review board [patenting] decisions on [the court's] own reasoning," rather than the Board's. *Id.* at 3a, 25a-27a. By thus aggrandizing the court of appeals' own role, the decision exceeds the proper bounds of judicial review. The decision's definitive adoption of an extra-statutory standard of review warrants review by this Court, which necessarily has greater detachment from the particular controversy about the respective roles of the agency and its reviewing court, as well as less reason for inhibition to depart from Federal Circuit precedent.

3. Proper administration of the patent system plays an important role in the continuing technological, and hence economic, development of the Nation. When properly issued in accordance with the stringent statutory requirements established by Congress, see 35

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[8] The PTO informs us that, of the three members of the Board who rendered the administrative decisions in this case, one holds a degree in electrical engineering, one holds a degree in electronics and has had extensive career experience in computer technology, and one holds an advanced degree in computer science and two in electrical engineering.

U.S.C. 100 *et seq.*, including the requirement of non-obviousness at issue in this case (*id.* § 103), patents "promote the Progress of Science and useful Arts" (U.S. Const., Art. I, § 8, Cl. 8). Just as surely, however, when improperly issued they retard that progress, stifle technological and economic competition, and may be invalidated, if at all, only through protracted and expensive litigation. See generally 35 U.S.C. 271 *et seq.* (infringement and remedies). The decision *not* to issue a patent—the only sort that will ordinarily be reviewable at the instance of a "dissatisfied" applicant, see 35 U.S.C. 141, 145—will frequently depend, as it did in this case, on the determination of close and highly technical factual questions. It is therefore critical that the expert judgment of the PTO's Board of Patent Appeals and Interferences, charged by Congress with the final administrative responsibility for determining whether a patent should issue (see 35 U.S.C. 7(b), 134), should be subject to judicial review and "correction" only within the limited bounds prescribed by Congress for the review of any administrative action.

There should be no doubt about the importance of the Federal Circuit's decision in this case. As the court of appeals acknowledged, the outcome of the case before that court—which has exclusive jurisdiction in cases of this type, see 28 U.S.C. 1295(a)(4)—"turn[ed] on" the court's selection of a standard of review. App., *infra*, 2a. The types of factual and legal questions involved in this case are not unusual, and one may expect that the standard of review will likewise be important or determinative in many other cases in which the Board has resolved close factual questions against the applicant. (Where the Board resolves a close case in favor of issuing the patent, there is no appellate review.) Indeed, as Judge Michel of the Federal Circuit

has stated in a speech to members of the bar, "standards of review influence dispositions in the Federal Circuit far more than many advocates realize." See Nard, *Deference, Defiance, and the Useful Arts*, 56 Ohio St. L.J. 1415, 1415 & n.3 (1995). Thus, like the burden of proof, which is similarly determinative at, but only at, the margin of close cases, the standard of judicial review will "rarely [be] without consequence and frequently may be dispositive." *Lavine* v. *Milne*, 424 U.S. 577, 585 (1976). And, like the burden of proof, the standard of review is an inherent aspect of *every* litigated case.

Moreover, the court's decision ultimately rested, not simply on its choice of standards, but on an interpretation of 5 U.S.C. 559 that, in the court's view, made that choice permissible. See App., *infra*, 9a-10a, 26a. That flawed construction of a widely applicable statute has the potential to unsettle the law with respect to judicial review of additional federal agencies subject to the APA, inviting other courts to inquire whether before 1947 they, too, may have used, albeit "perhaps not exclusively or intentionally" (*id.* at 25a), "heightened" standards of review that could now be revived should a court deem it desirable to do so.

Finally, it is significant that, in rendering its decision in this case, the court of appeals candidly acknowleged that it prefers to review the Board's decisions under a standard that allows it "to review board decisions on [the court's] own reasoning," rather than on the Board's. App., *infra*, 3a, 25a. The court recognizes that under the APA's normal standards of review it would, to the contrary, be required to "review board decisions on their own reasoning," an approach that "differ[s] both in character and [in] the amount of deference [it] contemplate[s]." *Id.* at 3a. The court's refusal to

countenance that result reveals the most fundamental error in this case.

Indeed, it is the broad choice between essentially deferential and essentially non-deferential review that the court of appeals faced, and made, in this case that most likely accounts for the extraordinary degree of interest that the court's choice of a standard of review has generated from the bench and bar. See 142 F.3d at 1448-1449 (listing amici before the en banc court).[9] In avowing its reasoning, the court of appeals has demonstrated an underlying approach to, and philosophy of, judicial review that is inconsistent with the letter and spirit of the APA. The court's en banc decision in this case accordingly warrants review by this Court.

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[9] See also, *e.g.*, Hon. Alan D. Lourie, *Speech to [American Intellectual Property Law Association], Jan. 22, 1998*, 55 Pat., Trademark & Copyright 243, 243 (BNA 1998) (discussing issue of judicial deference to the PTO, and noting that the court "had a standing room only courtroom" for the en banc argument in this case); Stoll, *A Clearly Erroneous Standard of Review*, 79 J. Pat. & Trademark Off. Soc'y 100 (Feb. 1997); Rennecker, *Ex parte Appellate Procedure in the Patent Office and the Federal Circuit's Respective Standards of Review*, 4 Tex. Intell. Prop. L.J. 335 (Spring 1996); Nard, *Deference, Defiance, and the Useful Arts*, 56 Ohio St. L.J. at 1467-1472.

CONCLUSION

The petition for a writ of certiorari should be granted.

Respectfully submitted.

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AUGUST 1998

APPENDIX A

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

No. 96-1258

IN RE MARY E. ZURKO, THOMAS A. CASEY, JR., MORRIE GASSER, JUDITH S. HALL, CLIFFORD E. KAHN, ANDREW H. MASON, PAUL D. SAWYER, LESLIE R. KENDALL, AND STEVEN B. LIPNER,

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[Filed: May 4, 1998]

Before: MAYER, Chief Judge,* RICH and NEWMAN, Circuit Judges, ARCHER, Senior Circuit Judge,** MICHEL, PLAGER, LOURIE, CLEVENGER, RADER, SCHALL, BRYSON and GAJARSA, Circuit Judges.

MAYER, Chief Judge.

Mary E. Zurko *et al.* appealed from a decision of the Board of Patent Appeals and Interferences sustaining the rejection of United States Patent Application No. 07/479,666 under 35 U.S.C. § 103 (1994). *Ex parte Zurko*, No. 94-3967 (Bd. Pat. Apps. & Int. Aug. 4, 1995). On appeal, this court reversed, holding that the board's decision—that the method claimed for improv-

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* Chief Judge Haldane Robert Mayer assumed the position of Chief Judge on December 25, 1997.

** Senior Circuit Judge Glenn L. Archer, Jr. vacated the position of Chief Judge on December 24, 1997.

ing security in computer systems was obvious—was based on clearly erroneous findings of fact. *In re Zurko*, 111 F.3d 887, 42 USPQ2d 1476 (Fed. Cir. 1997). Concluding that the outcome of this appeal turns on the standard of review used by this court to review board fact finding, we accepted the Commissioner's suggestion that we rehear the appeal in banc so that we could consider the following question: "Should this court review Patent and Trademark Office fact-findings under the Administrative Procedure Act standard of review instead of the presently applied 'clearly erroneous' standard?" 116 F.3d 874, 874 (Fed. Cir. 1997). We believe section 559 of the Administrative Procedure Act permits, and *stare decisis* warrants, our continued application of the clearly erroneous standard in our review of these fact- findings.

I.

The Commissioner has campaigned aggressively for this court to review factual findings underlying the board's patentability determinations using the more deferential substantial evidence standard found in section 10(e) of the Administrative Procedure Act (APA) and codified in relevant part at 5 U.S.C. § 706 (1994), but we have not done so. *See, e.g., In re Lueders*, 111 F.3d 1569, 1574-78, 42 USPQ2d 1481, 1484-87 (Fed. Cir. 1997); *In re Mac Dermid, Inc.*, 111 F.3d 890, 890-91, 42 USPQ2d 1479, 1480 (Fed. Cir. 1997); *In re Kemps*, 97 F.3d 1427, 1430-31 & nn. 5-6, 40 USPQ2d 1309, 1312-13 & nn. 5-6 (Fed. Cir. 1996) (a precondition to addressing the standard of review issue is that its resolution be relevant to the determination of the case); *In re Napier*, 55 F.3d 610, 614, 34 USPQ2d 1782, 1785 (Fed. Cir. 1995) (determining proper standard of review is unnecessary because board's fact finding could be

affirmed under more stringent standard); *In re Brana*, 51 F.3d 1560, 1568-69, 34 USPQ2d 1436, 1443-44 (Fed. Cir. 1995) (declining invitation to reconsider the standard of review because the decision does not turn on it). Specifically, the Commissioner argues that in appeals under 35 U.S.C. § 141, we should accept the factual findings underlying the board's patentability determinations as long as they are supported by probative evidence of a substantial nature (the substantial evidence standard found at 5 U.S.C. § 706(2)(E)),[1] or in the alternative[2] as long as they were made upon consideration of the proper factors (the arbitrary and capricious standard found at 5 U.S.C. § 706(2)(A)). Both standards require that we review board decisions on their own reasoning. Currently, we affirm decisions as long as we lack a definite and firm conviction that a mistake has been made. *See, e.g., Kemps*, 97 F.3d at 1430, 40 USPQ2d at 1312. This standard defines review for clear error and requires us to review board decisions on our reasoning. The substantial evidence, arbitrary and capricious, and clear error standards differ both in character and the amount of deference they contemplate. Thus, to choose among them, we must not only construe relevant sections of the APA and patent statutes, we must understand the historical context in

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[1] This standard is often quantified as: "more than a mere scintilla. It means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." *Consolidated Edison Co. v. NLRB*, 305 U.S. 197, 229, 59 S. Ct. 206, 217, 83 L.Ed. 126 (1938).

[2] Previously, the Commissioner has argued that the arbitrary and capricious standard found in section 706(2)(A) should be applied, *see In re Kemps*, 97 F.3d at 1430, 40 USPQ2d at 1312, or that alternatively either standard can be applied, *see In re Lueders*, 111 F.3d at 1575, 42 USPQ2d at 1485.

which the standards developed and the current context in which they operate.

II.

Congress enacted the APA in part to stem the abuses of power by agencies seemingly unchecked by requirements for procedural rigor. For example, the original presidential committee investigating the need for congressional control over these agencies reported: "[Agencies] are in reality miniature independent governments. . . . They constitute a headless 'fourth branch' of the Government, a haphazard deposit of irresponsible agencies and uncoordinated powers. . . . Furthermore, the same men are obliged to serve both as prosecutors and as judges. This not only undermines judicial fairness; it weakens public confidence in that fairness." *The Report of the President's Committee on Administrative Management* 39-40 (1937). This same language was quoted by Senator McCarran, and by Representative Walters, during consideration of the final bills. *See* 92 Cong. Rec. 2149-50 & 2163-64 (1946), *reprinted in Staff of Sen. Comm. on the Judiciary, 79th Congress, Administrative Procedure Act, Legislative History 1944-46* (1946) (*APA Legislative History*). Congress was also concerned about the lack of uniformity and consistency in and among the administrative and adjudicative processes of these agencies. *See generally APA Legislative History* at 189 (report of Senate Judiciary Committee), 242-44 (report of House Judiciary Committee). Acting upon information gathered for almost ten years, Congress set out to "enunciate and emphasize[ ] the tripartite form of our democracy and bring[ ] into relief the ever essential declaration that this is a government of law rather than of men." *Id.* at iii (Sen. McCarran).

As incorporated into Title 5 of the United States Code, the APA requires agencies to provide information to the public (§ 552), to follow specified rulemaking procedures (§ 553), and to follow procedures for formal administrative adjudications (§ 554) and hearings (§ 556). The APA goes on to state: "This subchapter [and] chapter 7 . . . , do not limit or repeal *additional requirements* imposed by statute or *otherwise recognized by law*. . . . Subsequent statute may not be held to supersede or modify this subchapter [and] chapter 7 . . . , except to the extent that it does so expressly." 5 U.S.C. § 559 (emphasis added). In chapter 7, the APA provides for judicial review of agency "action, findings, and conclusions":

> To the extent necessary to decision and when presented, the reviewing court shall decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the terms of an agency action. The reviewing court shall
>
> (1) compel agency action unlawfully withheld or unreasonably delayed; and
>
> (2) hold unlawful and set aside agency action, findings, and conclusions found to be—
>
> (A) *arbitrary, capricious*, an abuse of discretion, or otherwise not in accordance with law;
>
> (B) contrary to constitutional right, power, privilege, or immunity;

(C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right;

(D) without observance of procedure required by law;

(E) unsupported by *substantial evidence* in a case subject to sections 556 and 557 of this title or otherwise reviewed on the record of an agency hearing provided by statute; or

(F) unwarranted by the facts to the extent that the facts are subject to trial de novo by the reviewing court.

In making the foregoing determinations, the court shall review the whole record or those parts of it cited by a party, and due account shall be taken of the rule of prejudicial error.

Id. at § 706 (emphases added). Section 10, codified in relevant part at 5 U.S.C. §§ 701-706, "assumes that if the notice, hearings, and finding procedures are adopted as recommended they will obviate the reasons for change in the area and scope of judicial review." *APA Legislative History* at 2163.

The Department of Justice, which initially drafted the legislation that became the APA—the McCarran-Sumners Bill—explained that the bill had four basic purposes: "1. To require agencies to keep the public currently informed of their organization, procedures and rules (sec. 3). 2. To provide for public participation in the rule making process (sec. 4). 3. To prescribe uniform standards for the conduct of formal rule making (sec. 4(b)) and adjudicatory proceedings (sec. 5),

i.e., proceedings which are required by statute to be made on the record after opportunity for an agency hearing (secs. 7 and 8). 4. *To restate the law of judicial review.* (sec. 10)." *Attorney General's Manual on the Administrative Procedure Act* 9 (1947) (formatting and emphasis added). As is evident throughout the Attorney General's Manual,[3] the act was drafted to restate rather than alter existing, established standards: "It not only does not supersede special statutory review proceedings, but also generally leaves the mechanics of judicial review to be governed by other statutes and by judicial rules." *Id.* at 93. The Department of Justice intended that Congress enact any changes to existing laws of judicial review through explicit, subsequent legislation. *See id.* at 139 (§ 12).

Previous bills and substantial congressional testimony exempted, explicitly, the Patent Office from the APA's generally uniform standards of review. *See generally APA Legislative History* at 22 (The Senate Judiciary Committee's explanation of section 5 of Senator McCarran's bill: "The exception of matters subject to a subsequent trial of the law and the facts *de novo* in any court exempts such matters as . . . the

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[3] While not binding on our interpretation of the judicial review requirements imposed by the APA, the Attorney General's Manual provides persuasive historical evidence of the quality of review intended by the APA. *See, e.g., Steadman v. SEC*, 450 U.S. 91, 102 n. 22, 101 S. Ct. 999, 1008 n. 22, 67 L.Ed.2d 69 (1981) (giving deference because "Justice Clark was Attorney General both when the APA was passed and when the Manual was published"); *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 546, 98 S. Ct. 1197, 1213, 55 L.Ed.2d 460 (1978) (giving deference to "contemporaneous interpretation" of Attorney General's Manual "because of the role played by the Department of Justice in drafting the legislation").

work of the Patent Office (since judicial proceedings may be brought to try out the right to a patent)."); *id.* at 332 (statement of Allen Moore: "[The second of two exemptions in section 4] rules out such matter as . . . the work of the Patent Office (since judicial proceedings may be brought to try out the right to a patent)."); McCarran-Sumners Bill, S. 7, H.R. 1203, 79th Cong., § 9 (1945) (excluding Patent Office from judicial review chapter when the bill was first introduced); *Administrative Procedure: Hearings Before a Subcomm. of the Comm. on the Judiciary, United States Senate on S. 674, S. 675, and S. 918*, 77th Cong., at 20 (1941) (S. 675, § 301(f) expressly exempted matters relating to the patent and trademark laws); *id.* at 620 (Conder C. Henry, Assistant Commissioner of Patents, testifying: "We accordingly strongly recommend that any bill reported out of this committee exempt by express terms the Patent Office from the main provision."); Walter-Logan Bill, S. 915, H.R. 6324, 76th Cong. (1939) (President Roosevelt vetoed H.R. 6324, *see* H.R. Doc. No. 986, at 4 (1940), pending a report from the Attorney General's Committee on Administrative Procedure; section 7(b) of the resolution exempted, *inter alia*, "any matter concerning or relating to . . . patent, trademark, copyright. . . . "). These explicit exemptions make the absence of similar language from both the APA and the Attorney General's Manual instructive, even more so considering that Congress adopted the APA unanimously despite numerous compromises. *Cf. Wong Yang Sung v. McGrath*, 339 U.S. 33, 40, 70 S. Ct. 445, 450, 94 L.Ed. 616 (1950) ("The Act thus represents a long period of study and strife; it settles long-continued and hard-fought contentions, and enacts a formula upon which opposing social and political forces have come to rest. It contains many

compromises and generalities and, no doubt, some ambiguities.").

This history suggests that Congress drafted the APA to apply to agencies generally, but that because of existing common law standards and the availability of trial *de novo* pursuant to section 4915 of the Revised Statutes, the predecessor of 35 U.S.C. § 145, Congress did not intend the APA to alter the review of substantive Patent Office decisions. The Commissioner's current argument—that by removing language excluding the Patent Office from the McCarran-Sumners Bill, Congress intended courts to review board adjudications under the APA's substantial evidence or arbitrary and capricious standards—is less persuasive in light of these contemporaneous reports from the members of Congress and from Attorney General Clark. Rather, it is more likely that Congress viewed an explicit exception for the Patent Office as redundant in light of the "otherwise recognized by law" exception, 5 U.S.C. § 559, the *de novo* review exception, section 554(a)(1), or both. Such an interpretation would be consistent with the decision of the aforementioned Attorney General's Committee on Administrative Procedure not to study the highly specialized procedures of the Patent Office in preparing its report. *See, e.g., Hearings on S. 674, S. 675, and S. 918, supra* at 620, 1212-13 (statements of Conder C. Henry and Harold T. Stowell).

From this background, we construe section 559 as freeing Patent and Trademark Office patentability decisions from judicial review under standards enumerated by sections 706(2)(A) (arbitrary or capricious standard applied to informal agency proceedings) and 706(2)(E) (substantial evidence standard applied to formal agency proceeding), to the extent that a statutory

or common law standard was a more searching standard and hence an additional requirement recognized prior to 1947 that has not since been statutorily modified. Thus, the portion of section 559 stating that the judicial review provisions of the Act were not meant to "limit or repeal additional requirements . . . recognized by law" is best understood as preserving those standards of judicial review that had evolved as a matter of common law, rather than compelling that all such standards of review be displaced by the new statute. This construction preserves the benefits derived from the symbiotic relationship between judicially constructed common law and congressionally fashioned statutory law in the area of judicial review. *See, e.g.*, 5 Kenneth Culp Davis, Administrative Law Treatise 332, § 29, 1 (2d ed. 1984) ("Although the law of scope of review is a mixture of judge-made law with statutes, almost all the statutes have their origin in judicial thinking. For instance, § 706 of the Administrative Procedure Act . . . is basically a codification of law created by courts."). It also respects congressionally established limits on the creation of new common law in the area of judicial review, after 1947, as manifested by Congress' choice to exclude the "otherwise recognized by law" exception from the final sentence of 5 U.S.C. § 559: "Subsequent statute may not be held to supersede or modify this subchapter [and] chapter 7 . . . , except to the extent that it does so expressly." In adopting this construction, we deny the Commissioner's argument that the "otherwise recognized by law" language in section 559 requires that a single, clearly labeled standard of review was recognized before 1947.

III.

What kind of judicial review of Patent Office board fact finding did the common law recognize prior to 1947, and what did or do patent statutes require? It would be disingenuous to suggest that the courts employed a uniform standard of review prior to 1947. Because the reasons for this ambiguity come as much from the birth of new principles referred to by Cardozo in *The Nature of the Judicial Process* 166-67 (1921), as they do from the historical development of our patent statutes, *see* Oliver Wendell Holmes, *The Common Law* 33 (M. Howe ed. 1963) ("The history of what the law has been is necessary to the knowledge of what the law is."), we can recognize a standard only by studying the history of the cases and the patent statutes upon which they rely.

The first patent act gave the Secretary of State, the Secretary of War, and the Attorney General the authority to examine and issue patents. *See* Act of April 10, 1790, ch. 7, § 1, 1 Stat. 109, 109-10. There was no provision for an appeal from the decision of these Commissioners for the Promotion of Useful Arts. In 1793, Congress eliminated the examination of patents and directed that they be issued when the formal technical requirements, which were enumerated by statute, had been met. *See* Act of Feb. 21, 1793, ch. 11, §§ 3, 12, 1 Stat. 318-23. Congress gave the district courts responsibility for striking down invalid patents. *See id.* at 323 (§ 10). The act also provided for a three-member panel to arbitrate interfering applications, with one member suggested by each party and the third by the Secretary of State. *See id.* at 322-23(§ 9). However, the act provided no standards or processes by which an applicant could secure review when the

application was determined not to meet the formal technical requirements.

By the Act of July 4, 1836, Congress created an examination system for issuing patents. *See* Act of July 4, 1836, ch. 357, 5 Stat. 117. This act established a Patent Office, which it attached to the Department of State. *See id.* at 117-18 (§ 1). The act also created a presidentially appointed Commissioner of Patents to decide, *inter alia*, questions of patentability, and a three-member board of examiners appointed by the Secretary of State to hear *ex parte* appeals from those whose applications the Commissioner denied. *See id.* at 119-20 (§ 7). A party aggrieved by the outcome of an interference proceeding could "have remedy by bill in equity" in a United States court. *Id.* at 123-24 (§ 16). However, there was no appeal available from the decision of the board of examiners. In 1839, Congress first provided for review of patentability determinations of the Commissioner through a bill in equity to the Chief Justice of the District of Columbia, instead of review by the board of examiners. *See* Act of March 3, 1839, ch. 88, §§ 10, 11, 5 Stat. 353, 354.

In 1861, Congress provided for presidential appointment of three examiners-in-chief to consider appeals from an examiner's denial of a patent "for the purpose of securing greater uniformity of action in the grant and refusal of letters-patent." Act of March 2, 1861, ch. 88, § 2, 12 Stat. 246. The Commissioner of Patents heard appeals from this board, and then, as provided by the 1839 Act, the Chief Justice of the District of Columbia heard appeals from the Commissioner. *See ibid.* If unsuccessful in either venue, an applicant could still bring an action in equity in a federal district court. However,

neither the 1839 nor the 1861 acts articulated the standard of review to be used by these courts.

The Act of July 8, 1870, ch. 230 § 1, 16 Stat. 198, attached the Patent Office to the Department of the Interior. This act directed review of the examiners' patentability determinations to the examiners-in-chief (§ 46), from there to the Commissioner (§ 47), and then to the supreme court of the District of Columbia, sitting in banc (§ 48). If the Commissioner or the supreme court of the District of Columbia refused to grant a patent, applicant could seek a remedy by bill in equity. *See id.* (§ 52). This act also provided for review of the supreme court of the District of Columbia in the Supreme Court of the United States for any action "touching patent rights." *Id.* (§ 56). However, despite this elaborate review ladder, the act set out no standard for reviewing patentability determinations.

Reviewing a decision made under the authority of the 1870 act, the Supreme Court stated:

> Upon principle and authority, therefore, it must be laid down as a rule that, where the question decided in the patent office is one between contesting parties as to priority of invention, the decision there made must be accepted as controlling upon that question of fact in any subsequent suit between the same parties, unless the contrary is established by testimony which in character and amount carries thorough conviction. Tested by that rule, the solution on this controversy is not difficult. Indeed, the variety of opinion expressed by the different officers who have examined this testimony is persuasive that the question of priority is doubtful, and, if doubtful, the decision of the patent office must control.

Morgan v. Daniels, 153 U.S. 120, 125, 14 S. Ct. 772, 773-74, 38 L.Ed. 657 (1894) (review of Patent Office's interference decision under § 4915, Revised Statutes, predecessor to 35 U.S.C. § 146). In concluding, the Court stated: "It is enough to say that the testimony as a whole is not of a character or sufficient to produce a clear conviction[4] that the Patent Office made a mistake. . . ." *Id.* at 129, 14 S. Ct. at 775.

Following *Morgan*, the Court of Appeals for the District of Columbia reversed the Commissioner's decision only if it was manifestly wrong, *see, e.g.*, *Hopkins v. Riegger*, 262 F. 642, 643 (D.C. Cir. 1920) (interference); *Lindmark v. Hodgkinson*, 31 App. D.C. 612, 614 (1908) (interference), where the error was manifest or palpable; *see, e.g.*, *Bonine v. Bliss*, 259 F. 989, 989-90 (D.C. Cir. 1919) (interference); *Podlesak v. McInnerney*, 26 App. D.C. 399, 405, 408 (1906) (interference), or in a very clear case, *In re Barratt*, 11 App. D.C. 177, 179 (1897) ("[W]hile the appellant's device commends itself to our favorable consideration and may upon a judicial investigation, wherein proof is more fully supplied and the condition of the art more clearly set forth, be found entitled to the merit of patentable novelty, we should hesitate in this *ex parte* proceeding to reverse the concurrent decisions of all the tribunals of the Patent Office.").

In 1925, Congress moved the Patent Office to the Department of Commerce, *see* Act of March 4, 1925, ch. 1, § 1, 44 Stat. 1165, and in 1927, conjoined the review

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[4] We have said that this clear or thorough conviction of mistake standard does not differ substantively from the clear error standard we use today. *See Fregeau v. Mossinghoff*, 776 F.2d 1034, 1038, 227 USPQ 848, 851 (Fed. Cir. 1985).

functions of the examiners-in-chief and the adjudicatory authority of the Commissioner, thereby eliminating appeals from the former to the latter, *see* Act of March 2, 1927, ch. 273, § 3, 44 Stat. 1335, 1335-36. The 1927 act gave the Commissioner authority to choose the three-member board, called the Board of Appeals, that would review patentability decisions. *See id.* It also provided dissatisfied applicants with appeal rights to the Court of Appeals of the District of Columbia, in which case the applicants could not seek remedy by bill in equity under section 4915 of the Revised Statutes. *See id.* at 1336 (§ 8). Two years later, Congress created the Court of Customs and Patent Appeals (CCPA), splicing jurisdiction from the Court of Appeals for the District of Columbia over patent and trademark appeals from the Patent Office together with the jurisdiction of the Court of Customs Appeals over customs cases. *See* Act of March 2, 1929, ch. 488, §§ 1, 2, 45 Stat. 1475, 1475-76. However, like the Acts of 1870 and 1927, the Act of 1929 did not speak to the standard of review over factual findings of the Patent Office.

Asked to report one common law standard of review used by the courts vested with appellate jurisdiction over factual findings from the Patent Office, the cases author no clear answer. Their language is too ambiguous either because Congress and the Patent Office frequently tested new appellate structures, because the courts could not foresee the question presently before us, or—like many of our own cases—the application of a different standard of review would not have affected the outcome. The cases articulate various standards or methods of review, including the clear error standard, each of which requires more rigorous review than is required by the APA. *See, e.g.*, *Rodli v. Phillippi*, 33

C.C.P.A. 865, 154 F.2d 139, 140, 69 USPQ 97, 99 (CCPA 1946) ("most cogent evidence of mistake and miscarriage of justice" in fact finding of Board of Interference Examiners); *Mantz v. Jackson*, 31 C.C.P.A. 824, 140 F.2d 161, 164, 60 USPQ 329, 334 (CCPA 1944) (appellant given "heavy burden to show that the concurring decisions [of primary examiner and Board of Interference Examiners] are erroneous"); *Jardine v. Long*, 19 C.C.P.A. 1243, 58 F.2d 836, 836 (CCPA 1932) ("[T]his court . . . refuses to disturb decisions of the tribunals below [primary examiner and Board of Interference Examiners] upon findings of fact, unless fully convinced that such findings are not in accord with the weight of the evidence when such evidence is fairly weighed and construed.").

The manifest error standard, even if more deferential than the modern clear error standard as the Commissioner argues, clearly contemplates judicial review on more than just the board's own reasoning. *See, e.g.*, *Ranney v. Bridges*, 38 C.C.P.A. 1044, 188 F.2d 588, 596, 89 USPQ 419, 427 (CCPA 1951) ("It will be understood that in considering allegations of error as to findings of fact made by the tribunals of the Patent Office this court follows the proper and well established practice of appellate courts in refusing to reverse such findings unless we are convinced from our own study of the record that the findings are manifestly wrong because against the weight of the evidence.") Because of the recognized similarity in the meanings of the words "manifest" and "clear," and the similarity in the character of review they contemplate, we consider the manifest error standard to be at least a close cousin of the clear error standard. The CCPA also appears to have reviewed Patent Office fact findings "where it seemed

proper," *In re Christmann*, 27 C.C.P.A. 708, 107 F.2d 607, 609 (CCPA 1939), *de novo*, *see Townsend v. Smith*, 17 C.C.P.A. 647, 36 F.2d 292, 294 (CCPA 1929) (choosing not to apply the rule "that it must clearly and affirmatively appear that there has been some oversight, or mistake, or wrong construction of material facts . . . to justify this court in reversing the decision appealed from" because all three tribunals of the Patent Office differed "in their views as to what this evidence shows"),[5] and for material error, *see Zublin v. Pickin*, 21 C.C.P.A. 1097, 70 F.2d 732, 733 (CCPA 1934); *Clancy v. De Jahn*, 17 C.C.P.A. 714, 36 F.2d 131, 132 (CCPA 1929).

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[5] *Townsend*, and several cases cited *infra*, suggest that reviewing courts gave the Patent Office considerable deference when its various tribunals were in agreement, absent clear or manifest error in its fact finding. Some time in the early 1950s, courts ceased giving the Patent Office deference explicitly for this reason. *See, e.g., Application of Schechter*, 40 C.C.P.A. 1009, 205 F.2d 185, 188, 98 USPQ 144, 148 (CCPA 1953) ("Concurrent findings of lack of inventive novelty by the Patent Office tribunals are not conclusive upon this court, but they are persuasive since those tribunals presumably are familiar with the art."); *In re Kaufmann*, 39 C.C.P.A. 769, 193 F.2d 331, 335, 92 USPQ 141, 144 (CCPA 1951) ("We should like to note that if there were any doubt, the concurrent findings of obviousness or lack of invention by the tribunals of the Patent Office would be persuasive, although not conclusive, upon this court, since the Patent Office tribunals presumably are familiar with the advancement of the art."). Thus, although today's deference to the Patent and Trademark Office may have grown out of a respect for its specialized nature and the unanimity of its factual determinations, lack of unanimity would no longer require that a less deferential review standard be applied—because we review only the decision of the board on the record before it.

In stark contrast to the frequency with which the early cases used some review standard similar to clear error, these same cases appear not to have used the substantial evidence standard, which was applied by the Court to agency action in *Illinois Central Railroad Co. v. ICC*, 206 U.S. 441, 454, 466, 27 S. Ct. 700, 704, 709, 51 L.Ed. 1128 (1907). Nor have the patent cases used the arbitrary and capricious standard, which the Court applied to agency action in *United States ex rel. Ness v. Fisher*, 223 U.S. 683, 691, 694, 32 S. Ct. 356, 357-58, 359, 56 L.Ed. 610 (1912). Following Congress' enactment of the APA, the CCPA continued to review Patent Office decisions as it had done before 1947, without a clearly articulated standard of review. *See, e.g., Harris v. Clifford*, 53 C.C.P.A. 1463, 363 F.2d 922, 924, 150 USPQ 630, 632 (CCPA 1966) (following *Rodli, supra*, in applying the "most cogent evidence of mistake" standard); *Johns-Manville Corp. v. Ladd*, 328 F.2d 563, 563, 140 USPQ 362, 363 (D.C. Cir. 1964) (Patent Office findings will not be overturned "unless clearly infected with error").

In 1952, Congress repealed prior patent laws and extensively revised them. *See* Act of July 19, 1952, Pub. L. No. 593, ch. 950, 66 Stat. 792, 815, § 293, sec. 5 (1952 Patent Act). Though this act provided for the form and venue of judicial review of board adjudication, *see id.* (§§ 141, 145-46), 66 Stat. at 802-03, like its predecessors it did not provide a standard of review, nor did it suggest that the CCPA's standard of review be altered in light of or despite the APA, which Congress had enacted just five years earlier. *See Fregeau v. Mossinghoff*, 776 F.2d 1034, 1037, 227 USPQ 848, 851 (Fed. Cir. 1985) ("In the legislative history addressing the carryover of these procedures into the 1952 Patent

Act, it is stated: 'This group of sections [§§ 141-146] makes no fundamental change in the various appeals and other review of Patent Office action.'" (quoting 1952 U.S.C.C.A.N. 2394, 2400)). Therefore, the 1952 Patent Act did not explicitly state a standard for the CCPA to use when reviewing factual findings of the Board of Appeals.

In 1962, Congress amended section 135 of the 1952 Patent Act by adding subsection "(c)." *See* Act of October 15, 1962, Pub. L. No. 87-831, 76 Stat. 958. In its third paragraph, this subsection provides for review of the Commissioner's discretionary action in administering subsection 135(c) (settlement agreements in interference proceedings) under section 10 of the APA, which is codified in relevant part at Title 5, Chapter 7 of the United States Code. "The doctrine [*expressio unis* [sic] *est exclusio alterius*] instructs that where law expressly describes a particular situation to which it shall apply, an irrefutable inference must be drawn that what was omitted or excluded was intended to be omitted or excluded." *Lueders*, 111 F.3d at 1576 n. 12, 42 USPQ2d at 1486 n. 12. This would suggest that Congress intended not to encumber other Patent Office proceedings, such as fact finding by the Board of Appeals, with the type of deferential review contemplated by section 10 of the APA.

Congress changed the name of the Patent Office to the Patent and Trademark Office, *see* Act of January 2, 1975, Pub. L. No. 93-596, § 1, 88 Stat.1949, and passed the Federal Courts Improvement Act of 1982, which in part merged the CCPA with the United States Court of Claims to create this court and what is now the Court of Federal Claims, *see* Act of April 2, 1982, Pub. L. No. 97-164, 96 Stat. 25. The 1982 act combined, *inter alia*, na-

tionwide jurisdiction over appeals from district courts in cases arising under the patent laws, 28 U.S.C. § 1295(a)(1), with jurisdiction over direct appeals from the Patent and Trademark Office's Board of Appeals and its Board of Patent Interferences, *id.* § 1295(a)(4). An expressed purpose for doing so, similar to the purpose expressed in the Act of March 2, 1861, was to increase uniformity of decisionmaking in patent cases. *See Panduit Corp. v. All States Plastic Mfg. Co.*, 744 F.2d 1564, 1573-74, 223 USPQ 465, 470-71 (Fed. Cir. 1984) (quoting S. Rep. No. 97-275 at 5, *reprinted in* 1982 U.S.C.C.A.N. 11, 15 and H.R. Rep. No. 97-312 at 23). The Federal Courts Improvement Act did not declare what standard of review this court should apply to decisions of the Board of Appeals. In 1984, Congress merged the Board of Appeals and the Board of Patent Interferences into the Board of Patent Appeals and Interferences. *See* Act of November 8, 1984, Pub. L. No. 98-622, § 201, 98 Stat. 3383, 3386. Thus, after more than two hundred years of evolution, the board is composed of members including the Commissioner, deputy and assistant commissioners, and examiners-in-chief. *See* 35 U.S.C. § 7(a). Panels of at least three board members selected by the Commissioner review twice-rejected or final decisions of a primary examiner, *see* 37 C.F.R. § 1.191 (1997), and can affirm or reverse on the grounds specified by the examiner, or remand to the examiner for further consideration with or without a new ground for rejection, or permit amendments. *See id.* § 1.196(a)-(b). The board's *ex parte* proceedings involving patentability are not recorded, nor are they "hearings on the record" within the meaning of 5 U.S.C. § 554 (requiring trial-type procedures and a reliance on a closed record). *See Railroad Comm'n of Texas v. United States*, 765 F.2d 221, 227 (D.C.Cir.1985) (distinguishing hearings from hearings on the record).

The proceedings rely on the technical expertise of board members, *see* 37 C.F.R. § 1.196(b) (1997), they provide the option of an oral hearing, *see id.* § 1.194(c) (twenty minutes for appellant and fifteen for primary examiner) though no live testimony is taken, they are conducted largely in confidence, *see* 35 U.S.C. § 122, they do not prohibit consideration of materials beyond the record, *see* 37 C.F.R. § 1.196(b), and they are conducted under considerable time constraints. The examiners-in-chief operate under their authority as experienced patent examiners, with "competent legal knowledge and scientific ability," 35 U.S.C. § 7, rather than under the discretionary adjudicatory authority delegated to the Commissioner.

Although the APA does not explicitly exempt the Patent and Trademark Office from its standards of review, and we have reviewed certain actions of the Commissioner in the exercise of his discretionary duties according to APA requirements, *see, e.g., Ray v. Lehman*, 55 F.3d 606, 608, 34 USPQ2d 1786, 1787 (Fed. Cir. 1995) (denial of petition to reinstate patent for failure to pay maintenance fee properly reviewed by district court under APA's abuse of discretion standard); *Morganroth v. Quigg*, 885 F.2d 843, 846, 12 USPQ2d 1125, 1126-27 (Fed. Cir. 1989) (refusal to revive application properly reviewed by district court under APA's arbitrary, capricious, abuse of discretion standard); *Heinemann v. United States*, 796 F.2d 451, 453-54, 230 USPQ 430, 433-34 (Fed. Cir. 1986) (award of patent to United States instead of employee properly reviewed by Claims Court under APA's arbitrary, capricious, abuse of discretion standards), we have not held the

board's patentability decisions to the requirements of 5 U.S.C. §§ 554 (adjudications other than those subject to *de novo* review), 556 (hearings required by §§ 552-54), or 557 (decisions when hearings are required by 556). Since the creation of this court, we have consistently applied the clearly erroneous standard when reviewing factual findings of the board. *See, e.g., Lueders*, 111 F.3d at 1571, 42 USPQ2d at 1482 (Fed. Cir. 1997) (clear error review of what a prior art reference teaches or suggests); *Mac Dermid*, 111 F.3d at 890-91, 42 USPQ2d at 1480 (Fed. Cir. 1997) (denying request for in banc hearing for reason stated in *Kemps*); *In re Mayne*, 104 F.3d 1339, 1341, 41 USPQ2d 1451, 1453 (Fed. Cir. 1997) (clear error review of facts underlying obviousness determination); *Kemps*, 97 F.3d at 1429, 1430-31, 40 USPQ2d at 1312-13 (upholding board's fact finding under less deferential standard of review obviated need for deciding propriety of using the APA standards); *In re Baxter Travenol Labs.*, 952 F.2d 388, 390, 21 USPQ2d 1281, 1283 (Fed. Cir. 1991) (clear error review of board's factual finding of anticipation); *In re Caveney*, 761 F.2d 671, 674, 226 USPQ 1, 3 (Fed. Cir. 1985) (clear error review of on-sale factual findings of Board of Appeals); *In re Wilder*, 736 F.2d 1516, 1520, 222 USPQ 369, 372 (Fed. Cir. 1984) (clear error review of Board of Appeal's finding of inadequate description); *In re De Blauwe*, 736 F.2d 699, 703, 222 USPQ 191, 195 (Fed. Cir. 1984) (first opinion of this court indicating that the clearly erroneous standard is applied to Board of Appeal fact finding).

From this brief historical survey, we see that no patent statute speaks explicitly to the standard to be used when reviewing decisions of the board. But the common law recognized several standards prior to 1947,

including clear error and its close cousins. Thus, we conclude that our more searching clear error standard of review is an "additional requirement" that was "recognized" in our jurisprudence before 1947, which we therefore continue to apply under the exception in section 559.

IV.

Our decision is buttressed by the principle of *stare decisis*. Courts do not set aside long-standing practices absent a substantial reason. *See Arizona v. Rumsey*, 467 U.S. 203, 212, 104 S. Ct. 2305, 2310, 81 L.Ed.2d 164 (1984) ("[A]ny departure from the doctrine of *stare decisis* demands special justification."). *See generally* 18 Moore's Federal Practice § 134.06[1][a] (3d ed. 1997). The principle of *stare decisis* is integral to our jurisprudence "because it promotes the evenhanded, predictable, and consistent development of legal principles, fosters reliance on judicial decisions, and contributes to the actual and perceived integrity of the judicial process." *Payne v. Tennessee*, 501 U.S. 808, 827, 111 S. Ct. 2597, 2609, 115 L.Ed.2d 720 (1991). *Stare decisis*, moreover, has "special force in the area of statutory interpretation, for here . . . the legislative power is implicated, and Congress remains free to alter what we have done." *Patterson v. McLean Credit Union*, 491 U.S. 164, 172-73, 109 S. Ct. 2363, 2370, 105 L.Ed.2d 132 (1989).

In *Patterson*, the Court provided guidance about when prior decisions may be overruled:

In cases where statutory precedents have been overruled, the primary reason for the Court's shift in position has been the intervening development of the law, through either the growth of judicial doctrine or further

action taken by Congress. Where such changes have removed or weakened the conceptual underpinnings from the prior decision, or where the later law has rendered the decision irreconcilable with competing legal doctrines or policies, the Court has not hesitated to overrule an earlier decision.

* * * * * *

Another traditional justification for overruling a prior case is that a precedent may be a positive detriment to coherence and consistency in the law, either because of inherent confusion created by an unworkable decision, or because the decision poses a direct obstacle to the realization of important objectives embodied in other laws.

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Finally, it has sometimes been said that a precedent becomes more vulnerable as it becomes outdated and after being tested by experience, has been found to be inconsistent with the sense of justice or with the social welfare.

Id. at 173-74, 109 S. Ct. at 2370-71 (internal quotation marks and citations omitted).

Just as we find no language in the APA, in patent statutes, or the legislative materials that report their respective codifications, suggesting that we should alter our standard of review, we also find no such direction in our decisions or those that preceded the establishment of this court. While it is unclear what prejudice might befall patentees and patent applicants were the standard to be changed, the Commissioner has made no suggestion that our current standard of review is unworkable, intolerable, prejudicial, burdensome, or even that it adversely affects the administration of the

patent system. The standard has not become a doctrinal anachronism, nor have the premises underlying it changed to make it irrelevant or unjustifiable—it is very much alive and in use throughout the legal system. Absent a reason to deviate from our settled practice of reviewing factual findings of the board's patentability determinations for clear error, we sustain the present standard of review. Our interpretation of section 559 of the APA permits this choice, because no statute speaks directly to a required standard, and review for clear error was certainly recognized in the cases—though perhaps not exclusively or intentionally—before 1947.

We believe that altering this standard, absent compelling reason to do so, replaces the very rule of law our jurisprudential system was created to promote with the erratic and arbitrary decisions of men that can only undermine the public's confidence. We also believe the premises underlying review for clear error justify its use in these circumstances. The Commissioner has suggested that imposing APA review on board decisions will not have much of an effect on the substance of those decisions. By making it clear that we review factual findings for clear error, and thereby review board decisions on our own reasoning, we hope the board understands that we are more likely to appreciate and adopt reasoning similar to its reasoning when it is both well articulated and sufficiently founded on findings of fact. *See Gechter v. Davidson*, 116 F.3d 1454, 1457-59, 43 USPQ2d 1030, 1032-35 (Fed. Cir. 1997). This should encourage administrative records that more fully describe the metes and bounds of the patent grant than would a more deferential standard of review. *Cf. Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17, ——, 117 S. Ct. 1040, 1051,

137 L.Ed.2d 146 (1997) ("Where no explanation is established, however, the court should presume that the PTO had a substantial reason related to patentability for including the limiting element added by amendment. In those circumstances, prosecution history estoppel would bar the application of the doctrine [of] equivalents as to that element.") It will preserve the confidence of inventors who have relied on this standard in prosecuting their patents. It will also promote consistency between our review of the patentability decisions of the board and the district courts in infringement litigation. Finally, it will help avoid situations where board fact finding on matters such as anticipation or the factual inquiries underlying obviousness become virtually unreviewable.

V.

Section 559, alone, neither requires our continued application of the "clearly erroneous" standard of review to fact findings in board decisions nor precludes it. Although it was simply one of several standards discernible from the case law prior to the 1947 enactment of the APA, the clear error standard was nevertheless an "additional requirement[ ] . . . recognized by law." There is no indication that Congress intended to alter that standard in enacting the APA. None of the amendments to the Patent Act since 1947 have substituted another standard of review, or indicated that only the APA standards should apply. We have applied the clear error standard—and only this standard—consistently since the court's genesis in 1982. Our ability to oversee complex legal determinations such as obviousness would be undermined if the board's underlying factual determinations were reviewed more deferentially than for clear error. In view of all these considerations, we conclude that section 559 and *stare decisis* together justify our continued application of this heightened level of scrutiny to decisions by the board. Accordingly, the question posed in this rehearing in banc is answered in the negative, and the decision of the Board of Patent Appeals and Interferences is reversed for the reasons set out in the court's opinion reported at 111 F.3d 887 (Fed. Cir. 1997).

APPENDIX B

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

No. 96-1258

IN RE MARY E. ZURKO, THOMAS A. CASEY, JR., MORRIE GASSER, JUDITH S. HALL, CLIFFORD E. KAHN, ANDREW H. MASON, PAUL D. SAWYER, LESLIE R. KENDALL, AND STEVEN B. LIPNER,

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[Filed: April 15, 1997]

Before: ARCHER, Chief Judge, NEWMAN, and MICHEL, Circuit Judges.

ARCHER, Chief Judge.

Applicants Mary E. Zurko et al. appeal from a decision of the Board of Patent Appeals and Interferences (Board) sustaining the rejection of their U.S. Patent Application No. 07/479,666 (the '666 application) under 35 U.S.C. § 103 (1994), *Ex parte Zurko*, No. 94-3967 (Bd. Pat. Apps. & Int. Aug. 4, 1995). We reverse.

BACKGROUND

The '666 application relates to a method for improving security in a computer system. A computer environment or system that has some form of security to prevent unauthorized users and commands is known as a "trusted" environment or system. Generally, "trusted" software or code is used to perform "trusted" commands. Because trusted code is often quite costly

to obtain, applicants sought to design a secure system which could operate with untrusted as well as trusted code.

Applicants' claimed method[1] generally involves processing a trusted command with untrusted code and sending that command to the trusted computing environment. The computer system then sends the command back to the user over a trusted pathway to verify the command. The user then sends a signal over the trusted pathway indicating whether the command is correct. If the command is correct, the system carries out the command.

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[1] Representative claim 1 reads as follows:

1. A machine-executed method for executing a trusted command issued by a user on a computer system, the computer system including an untrusted computing environment and a trusted computing environment, said method comprising the steps of:

(a) parsing the trusted command in the untrusted computing environment to generate a parsed command;

(b) submitting the parsed command to the trusted computing environment;

(c) displaying a representation of the parsed command to the user through a trusted path;

(d) receiving a signal from the user through a trusted path signifying whether the displayed representation accurately represents the user's intentions;

(e) if the signal signifies that the displayed representation does not accurately represent the user's intentions, then preventing the execution of the parsed command; and

(f) if the signal signifies that the displayed representation accurately represents the user's intentions, executing the parsed command in the trusted environment.

Claims 1, 4, and 5 of the '666 application stand rejected under 35 U.S.C. § 103 based on two pieces of prior art. The primary reference is the UNIX operating system as disclosed in the applicants' information disclosure statement. Applicants described the UNIX system as operating in a "trusted" environment yet able to run some untrusted programs unsecurely. They concluded that "the prior art includes an untrusted program parsing a command and then executing the command by calling a trusted service that executes in a trusted computing environment."

The secondary reference is a program known as Dunford, FILER Version 2.20, (FILER2) also disclosed in applicants' information disclosure statement. Applicants described the FILER2 program as one which "repeats back potentially dangerous user commands and requests confirmation from the user prior to execution." For example, applicants stated that when a user asks to delete a file, the FILER2 program will seek confirmation before that command is executed.

The Board sustained the rejection of the claims at issue, stating that "the artisan would have been *led from these teachings* to take the trusted command parsed in the untrusted environment and submitted to the trusted computing environment, as taught by UNIX, and to display the parsed command to the user for confirmation prior to execution, as suggested by [FILER2]." (Emphasis added.) According to the Board, the only claimed step not explicit in the prior art is the step of obtaining confirmation over a trusted path. The Board, however, viewed that step as inherent in the prior art. It stated in this connection that "[w]ith regard to communication over a trusted path, if not explicit in the prior art, it is either inherent or

implicit." Because UNIX parses a command in an untrusted environment and executes it in a trusted environment, the Board reasoned that any confirmation communication must inherently be over a trusted pathway and stated that it "is basic knowledge that communication in trusted environments is performed over trusted paths."

DISCUSSION

Obviousness is a legal question based on underlying factual determinations. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1566, 1 USPQ2d 1593, 1596 (Fed. Cir. 1987). We review the ultimate determination of obviousness *de novo* and the underlying factual determinations for clear error. *In re Kemps*, 97 F.3d 1427, 1428, 40 USPQ2d 1309, 1311 (Fed. Cir. 1996).

Applicants argue that the references relied on fail to teach or suggest parsing a trusted command with untrusted code, followed by performing a confirmation or repeat-back with trusted code over a trusted path as claimed. Applicants contend that the Board's finding that the prior art inherently teaches this confirmation is clearly erroneous: UNIX does not suggest obtaining confirmation over a trusted communication path. According to applicants, the combination of UNIX with FILER2 suggests, at most, a system in which trusted commands are parsed in an untrusted environment and then repeated back to the user via the untrusted UNIX system. Applicants further argue that there is no motivation to combine the references and that the Board used hindsight.

The Patent & Trademark Office (PTO) responds that one of skill in the art wanting to create a secure system would know to seek verification of a command over a

trusted path because untrusted paths are by definition not secure. It points out that there are only two ways that FILER2's repeat-back confirmation can be performed—over a trusted path or over an untrusted path. The PTO asserts that one of skill in the art creating a high security system would naturally choose the trusted path. The PTO further argues that the motivation to combine the references comes from the nature of the problem to be solved.

We agree with applicants that the Board's finding that the prior art teaches, either explicitly or inherently, the step of obtaining confirmation over a trusted pathway is clearly erroneous.[2] *See In re Bell*, 991 F.2d 781, 784, 26 USPQ2d 1529, 1531 (1993) ("What a reference teaches and whether it teaches toward or away from the claimed invention are questions of fact."); *In re Napier*, 55 F.3d 610, 613, 34 USPQ2d 1782, 1784 (Fed. Cir. 1995) (stating that the inherent teaching of a prior art reference is a question of fact). In so erring, the Board impermissibly used hindsight to arrive at the claimed invention. *See W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983) ("To imbue one of ordinary skill in

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[2] The Commissioner argues that this court should review findings by the Board using a more deferential standard as required by the Administrative Procedure Act, 5 U.S.C. § 706(2) (1994). Only the court sitting in banc may answer the question of whether a different standard of review of the Board's findings should apply and, if so, whether the Board's decision in light of supporting findings reviewed under such a standard should be affirmed.

The argument is appropriately made in a petition suggesting rehearing in banc, in a case such as this, wherein the court has decided that clear error by the Board requires reversal. *See In re Kemps*, 97 F.3d 1427, 1431, 40 USPQ2d 1309, 1312 (Fed. Cir. 1996).

the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher."). While in retrospect, looking at applicants' invention, it might seem logical to perform a repeat-back in the UNIX system over a trusted line, neither UNIX nor FILER2 teaches communicating with the user over a trusted pathway.

In UNIX a command is parsed in an untrusted environment and is then sent to a trusted system. Thus, the only communication with the user takes place over an untrusted path. Likewise, the secondary reference, FILER2, relied on by the Board fails to supply this missing element. The Board has not pointed to any teaching of performing repeat-back commands in a trusted and secure system. The FILER2 program is directed to repeating back commands on an unsecure system to ensure that the user has correctly entered the command and not, as in the claimed invention, to ensure that the correct user has entered a command or to ensure that the command has not been altered. Because neither UNIX nor FILER2 teaches either explicitly or implicitly communicating with the user over a trusted pathway, the Board clearly erred in its finding of inherency from the prior art.

In addition, the Board also clearly erred in finding that UNIX, FILER2 and the record teach communicating with the user over both a trusted *and* an untrusted path as claimed. Indeed, the Board's findings that one skilled in the art knew that communications in trusted environments must be over trusted

paths teaches away from using both a trusted and an untrusted path.

Finally, to say that the missing step comes from the nature of the problem to be solved begs the question because the Board has failed to show that this problem had been previously identified anywhere in the prior art. *See In re Sponnoble*, 56 C.C.P.A. 823, 405 F.2d 578, 585, 160 USPQ 237, 243 (CCPA 1969) ("[A] patentable invention may lie in the discovery of the source of a problem even though the remedy may be obvious once the source of the problem is identified.").

Thus, we must conclude that, on this record, the obviousness of the claimed invention has not been established.

APPENDIX C

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 29

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

EX PARTE MARY E. ZURKO, THOMAS A. CASEY, JR., MORRIE GASSER, JUDITH S. HALL, CLIFFORD E. KAHN, ANDREW H. MASON, PAUL D. SAWYER, LESLIE R. KENDALL AND STEVEN B. LIPNER

Appeal No. 94-3967
Application 07/479, 666[1]

ON BRIEF

Before: THOMAS, KRASS and BARRETT, *Administrative Patent Judges.*

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[1] Application for patent filed February 13, 1990.

KRASS, *Administrative Patent Judge.*

ON REQUEST FOR RECONSIDERATION

Appellants request reconsideration of that part of our decision of July 31, 1995 wherein we sustained the rejection of claims 1, 4 and 5 under 35 U.S.C. 103.

According to appellants, the decision was flawed in its assertion that the UNIX reference

> teaches the parsing of a trusted command in the untrusted computing environment. With regard to communication over a trusted path, if not explicit in the prior art, it is either inherent or implicit [bottom of page 7 of the decision].

Appellants challenge this assertion and ask for a citation of evidence in support thereof.

The decision relied on the citation of the UNIX system as reported in the information disclosure statement (Paper No. 6, page 2) wherein it was stated that "[t]hese system calls could be regarded as 'trusted'." The disclosure goes on to say that the system calls can "all be used by unprivileged programs running on behalf of unprivileged users. Such programs may be deemed 'untrusted'." The disclosure then concludes with: "Thus, the prior art includes an untrusted program parsing a command and then executing the command by calling a trusted service that executes in a trusted computing environment. . . ."

Therefore, it appears clear to us, from the information disclosure statement that it was known to use untrusted programs to parse trusted commands. When one speaks of "trusted" commands, it is our view that the artisan would have understood this to mean commands or information that is normally communicated

over a trusted path. This meaning, to us, is inherent in the term "trusted" and it appears totally unreasonable for appellants to demand any more evidence than the term itself. See *In re Bozek*, 416 F.2d 1385, 163 USPQ 545 (CCPA 1969).

Appellants next contend that reference to a trusted and untrusted computing environment is not the same as a trusted communications path in a computing environment that includes both trusted and untrusted components [top of page 2 of the request for reconsideration]. It is our view, however, that reference to a trusted computing environment necessarily implies a "trusted communications path." Since the prior art clearly indicates both a trusted and untrusted computing environment, it also implies that there are trusted and untrusted communications paths attendant thereto.

In response to appellants' assertion [page 2 of the request for reconsideration] that the cited references do not suggest the specific technique of parsing a command in the untrusted environment, then repeating back the command for confirmation over a trusted path, achieving an advantageous division of labor, our rationale for combining the teachings of the applied references is fully explained at pages 6-9 of our decision and need not be reiterated here.

We have granted appellants' request to the extent that we have reconsidered our decision but we deny the request with regard to making any changes therein.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. 1.136(a).

DENIED

APPENDIX D

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

EX PARTE MARY E. ZURKO, THOMAS A. CASEY, JR., MORRIE GASSER, JUDITH S. HALL, CLIFFORD E. KAHN, ANDREW H. MASON, PAUL D. SAWYER, LESLIE R. KENDALL AND STEVEN B. LIPNER

Appeal No. 94-3967
Application 07/479, 666[1]

ON BRIEF

Before: THOMAS, KRASS and BARRETT, *Administrative Patent Judges.*

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[1] Application for patent filed February 13, 1990.

KRASS, *Administrative Patent Judge.*

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1, 4 and 5. Claims 6 through 14, 16 and 21 are drawn to a nonelected invention and are not before us on appeal herein.[2] Claims 2, 3, 15 and 17 through 20 have been cancelled.

The invention is directed to a method for executing a "trusted" command in a secure computer system whereby the trusted command is parsed in an "untrusted" computing environment so that a trusted command is implemented through both a trusted command and an untrusted code, resulting in cost savings on the more expensive trusted command apparatus. Complexity of the trusted computer base (TCB) is reduced, which permits this cost saving, by reducing the amount of trusted code that must be verified or assured.

Independent claim 1 is reproduced as follows.

1. A machine-executed method for executing a trusted command issued by a user on a computer system, the computer system including an untrusted computing environment and a trusted computing environment, said method comprising the steps of:

(a) parsing the trusted command in the untrusted computing environment to generate a parsed command;

(b) submitting the parsed command to the trusted computing environment;

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[2] Responsive to a restriction requirement made on July 21, 1993 (Paper #17), appellants provisionally elected, "under protest," to prosecute claims 1, 4 and 5 (Response of August 23, 1993-Paper #18).

(c) displaying a representation of the parsed command to the user through a trusted path;

(d) receiving a signal from the user through a trusted path signifying whether the displayed representation accurately represents the user's intentions;

(e) if the signal signifies that the displayed representation does not accurately represent the user's intentions, then preventing the execution of the parsed command; and

(f) if the signal signifies that the displayed representation accurately represents the user's intentions, executing the parsed command in the trusted environment.

The examiner relies on the following references.

UNIX operating system as disclosed in the information disclosure form paper #6 page #2.

Dunford, FILER Version 2.20 User documentation 05/14/86 also as disclosed in the information disclosure form, paper #6, page #2.

Claims 1, 4 and 5 stand rejected under 35 U.S.C. 112, second paragraph as being indefinite. Claims 1, 4 and 5 stand further rejected under 35 U.S.C. 103 as unpatentable over UNIX in view of Dunford.

Reference is made to the briefs and answers for the respective details of the positions of appellants and the examiner.

OPINION

At the outset, we note that, at the top of page 1 of the reply brief, appellants complain about the timing of the restriction requirement in this case, *i.e.* , after the filing of the notice of appeal and the principal brief, and

request that we "review the final rejection as to all the appealed claims, not just as to those provisionally elected."

While we sympathize with appellants and agree that the restriction requirement was ill-timed[3], appellants' remedy is through a petition to the Commissioner under 37 C.F.R. 1.181 and not through an appeal to the Board. We note that a normal petition of the restriction requirement under 37 C.F.R. 1.144 does not seem appropriate in the instant case because section 1.144 states that such a petition "must be filed not later than appeal" while the examiner in this case did not make the requirement until after the appeal had been filed.

Accordingly, the only claims before us on appeal herein are claims 1, 4 and 5. In accordance with appellants' grouping of the claims at page 2 of the principal brief, claims 1, 4 and 5 are argued separately with regard to the rejections under 35 U.S.C. 112, second paragraph but stand or fall together with regard to the rejection under 35 U.S.C. 103.

Turning first to the rejection of claims 1, 4 and 5 under the second paragraph, we will not sustain this rejection.

The examiner lists many alleged errors in the claims. Some of these allegations include the following: "The claim [claim 1] does not state that the untrusted environment will submit the parsed command to the trusted environment;" ". . . the command could have been parsed anywhere as long as the parsed command

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[3] MPEP 811, in explaining 37 C.F.R. 1.142(a), states that "the examiner should, make a proper requirement as early as possible in the prosecution, in the first action if possible, otherwise, as soon as a proper requirement develops."

is submitted and displayed back to the user in the trusted environment;" and "the claim is missing essential information." The examiner also contends that while claim 1 recites a method of executing a trusted command, the "steps at best support verifying whether a command should be executed. This is not executing a command." The examiner also concludes that the limitations of claims 4 and 5 are not limitations on the method of claim 1.

It is clear from the tenor of the examiner's language that the examiner indeed understands the invention, as claimed. The allegations of the examiner appear to us to be recommendations as to how to make the claims more complete, or narrower in scope. In our view, they relate to breadth, rather than indefiniteness. With regard to whether the steps of claim 1 support the preamble's "method for executing . . . ," it is clear from the last step of the claim that *if* the received signal accurately represents the user's intentions, the parsed command is executed. We also find nothing improper about claims 4 and 5 since these claims merely limit the types of "trusted" and "untrusted" computing environments, respectively.

The rejection of claims 1, 4 and 5 under the second paragraph of 35 U.S.C. 112 is reversed.

We now turn to the rejection of claims 1, 4 and 5 under 35 U.S.C. 103, focusing our attention on claim 1.

As noted by the examiner, Dunford teaches that the FILER program "repeats back potentionally dangerous user commands and requests confirmation from the user prior to execution" (from appellants' disclosure statement (page 2)). Thus, although not in a secured, or trusted, environment, Dunford clearly suggests to

the artisan that it is desirable for the user to view the command and verify such command before execution.

As stated in appellants' information disclosure statement (page 2), relied on for the prior art disclosure, the UNIX operating system teaches that "the prior art includes an untrusted program parsing a command and then executing the command by calling a trusted service that executes in a trusted computing environment, namely kernel mode." Appellants also state therein that "[t]his art is believed to be pertinent to claim 1 prior to its amendment."

It is our view, as it was the examiner's, that the artisan would have been led from these teachings to take the trusted command parsed in the untrusted environment and submitted to the trusted computing environment, as taught by UNIX, and to display the parsed command to the user for confirmation prior to execution, as suggested by Dunford. It would have been nothing more than exercise of good common sense to prevent the execution of the command if it does not represent the user's intention and to permit execution when the command does represent the user's intention. This is the purpose of displaying the command to the user for confirmation, as taught by Dunford.

In their principal brief, appellants argue that there is no suggestion for combining the teachings of Dunford and UNIX. We disagree. UNIX clearly teaches the execution of a user command and, as taught by Dunford, albeit in an untrusted environment, it is desirable for the user to confirm commands prior to execution. Clearly then, a user would have desired to view and verify the commands in UNIX. In our view, the combination is proper.

On page 15 of the principal brief, appellants also argue that in the instant claim, both the repeat back and the confirmation are communicated over a trusted path and that the parsing of the trusted command in an untrusted environment is followed by transmission of a parsed representation of the command to the trusted environment.

Clearly, from the recited portion of UNIX *supra*, this reference teaches the parsing of a trusted command in the untrusted computing environment. With regard to communication over a trusted path, if not explicit in the prior art, it is either inherent or implicit. As the examiner states, at page 7 of the principal answer, "it is basic knowledge that communication in trusted environments is performed over trusted paths." This Official notice taken by the examiner is challenged by appellants at page 2 of the reply brief. While normally the examiner would be put to his/her proof when challenged as to a contention of Official notice, that challenge must be reasonable. *In re Boon*, 439 F.2d 724, 169 USPQ 231 (CCPA 1971). We do not consider appellants' challenge in the instant case to be reasonable as, in our view, there can be no reasonable doubt that communication in trusted environments must be over trusted paths, by definition. If not, the system is not trusted, or secure. Appellants' position to the contrary belies common sense in the secure communication arts. See *In re Bozek*, 416 F.2d 1385, 163 USPQ 545 (CCPA 1969). Communication in a trusted environment would normally be assumed, by artisans, to be over trusted paths.

Appellants' disclosed and claimed invention appears to be in the reduction of the amount of trusted code that must be verified or assured, thus reducing the com-

plexity of the trusted computer base (TCB). This much is believed to be taught by the prior art UNIX system portion quoted *supra*. While appellants admit, in their disclosure statement, that, regarding UNIX, "[t]his art is believed to be pertinent to claim 1 prior to its amendment" (the amendment believed to be amendment of Paper #11, June 23, 1992), we find nothing in this amendment which distinguishes over that taught by UNIX. UNIX clearly mentions both a trusted and an untrusted computing environment in its disclosure of an untrusted program and a trusted system. With regard to amendment of a "trusted path," as explained *supra*, artisans would have been aware that communications in a trusted computing environment will take place over trusted paths. The addition of executing the command if verified by the user is, as explained *supra*, only an exercise of common sense by an artisan. Clearly, execution would be desired only if the command is confirmed by the user.

We have sustained the rejection of claims 1, 4 and 5 under 35 U.S.C. 103 but we have not sustained the rejection of claims 1, 4 and 5 under 35 U.S.C. 112, second paragraph. Accordingly, the examiner's decision is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. 1.136(a).

AFFIRMED